SECTION 203 -- REMOVAL OF STRUCTURES AND OBSTRUCTIONS

203.01 -- Description

1. a. This work consists of clearing all tracts, the removal and disposal of all buildings, lighting, traffic signals, fences, manholes, gutters, curbs, structures, headwalls, culverts, bridges, pavements, abandoned pipelines or utilities, and other obstructions not designated to remain. It includes salvaging the designated materials and backfilling the resulting cavities.

b. Removal of existing roadway lighting, sign lighting, and traffic signals shall be accomplished as shown in the plans.

2. Unless structures interfere with the work, they shall not be removed until the new structures replacing them are complete.

3. Environmental Requirements:

a. If there are lead plates under existing bearings, the lead plates are considered to be “recyclable materials” and “scrap material” in accordance with Title 128, Rules and Regulations Governing Hazardous Waste Management in Nebraska. Lead plates must be recycled in accordance with the requirements of the above noted rules and regulations and as follows.

(1) The lead plates must be recycled at a legitimate recycling facility of scrap metal. Disposal of these lead plates by any other means is not allowed. The Contractor shall provide documentation to the Engineer that these lead plates have been delivered to a recycling facility. This documentation shall include the following:

(i) Number of lead plates delivered to the recycling facility.

(ii) Total weight of the lead plates delivered to the recycling facility.

(iii) Name and address of the recycling facility accepting the lead plates.

(iv) Date the lead plates were shipped to the recyling facility.

(v) Shipment ticket documenting receipt of the lead plates by the recycling facility.

b. The contractor shall provide for the protection, health and safety of his workers during the handling of the lead plates. This shall be done in accordance with the Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) standards, and all applicable federal, state, and local regulations.

203.02 -- Construction Methods

1. The Contractor shall excavate as necessary to perform any removal.

2. a. All nonsalvageable material shall become the property of the Contractor and must be promptly removed from the project.

b. When a portion of the existing structure is to be retained, the Contractor shall not damage the retained portion during construction operations.

c. The Contractor shall first complete all removal operations which might endanger any new construction.

3. a. "Preparation of Structure at Station _____" includes removing any part of the existing concrete or masonry structure (usually a box culvert) and using it in the new structure as indicated in the plans and the work prescribed in the plans as preparatory to adapt a structure to an extension or reconstructed structure.

b. The connecting edges of the existing structure shall be cut, chipped, and trimmed to the required lines and grades without weakening or damaging that part of the structure to be retained. All existing reinforcing steel which is encountered shall be cleaned, straightened, and extended into the new work as shown in the plans.

4. a. The Contractor shall remove all pavement identified for removal in the plans.

b. Ballast, gravel, bituminous material, or other surfacing or pavement materials designated for Department salvage shall be stockpiled at designated locations without contaminating the material with dirt or foreign materials.

c. Concrete pavement, sidewalks, curbs, gutters, and similar structures to be left in place shall be sawed to a true vertical line or removed to an existing joint.

5. Brick surfacing removal requires the Contractor to remove the brick surface, all foundation structures, base courses, and sand beds.

6. a. The Contractor shall clear all building tracts. This shall include all work required to remove all foundations, basement walls, driveways, walks, and other miscellaneous items encountered within the specified tract and disposing of all materials.

b. Basement walls shall be removed to an elevation at least 2 feet below finished ground elevation, the concrete floors broken into pieces of approximately 4 square feet and left in place, and the cavity backfilled with approved material.

c. Building removal responsibilities shall include disconnecting all sewers and other utilities encountered and plugging the sewer lines with concrete.

7. The Contractor shall remove all other miscellaneous structures encountered to at least 2 feet below finished ground elevation.

8. Contractor Removal of Bridges, Culverts, and Other Drainage Structures:

a. The Contractor shall remove existing substructures to the natural stream bottom, and those parts outside the stream shall be removed to 2 feet below the natural ground surface.

b. Bridges and culverts designated in the plans or special provisions or otherwise ordered to be salvaged shall be dismantled without damage, match-marked if appropriate, cleaned, and transported for storage at designated locations.

c. The Contractor shall burn apart at the joints or otherwise demolish bridge trusses that the Engineer determines are unfit for reuse on a public road.

d. The Contractor shall remove all other structures from the right-of-way.

e. The Contractor shall remove abutments, piers, bents, and walls entirely or dismantle them to an elevation at least 2 feet below the subgrade, slope face, or original ground level, whichever is lowest. Piers in stream beds shall be removed to the stream bed.

9. Concrete designated for use as riprap shall be broken into pieces not to exceed 330 lb and promptly stockpiled or placed at designated locations. No dimension shall be more than 4 times the least dimension.

10. a. When salvaging or removing sewers, manholes, catch basins, and inlets, the Contractor shall rebuild and reconnect any live sewers associated with the removal.

b. Sanitary bypass service shall be maintained during construction operations.

c. When manholes, catch basins, or inlets are to be abandoned, the Contractor shall plug pipe connections with concrete of the same class as that being used in the construction of new structures.

11. The Contractor's removal of discharge structures shall include the concrete and metal flumes, concrete and metal slope drains, and the concrete discharge basin.

12. a. Retaining walls shall be removed as indicated in the plans.

b. When only a portion of a wall is removed, the ends of those portions remaining will be modified, trimmed, and dressed to provide a finished appearance.

13. The Contractor shall cut off or drive piles to the elevations indicated in Table 203.01.

Table 203.01

Pile Cut Off Elevation	
Excavation or embankment areas	2 feet below finished grade
Dry stream beds	2 feet below natural ground
Running streams	at the stream bed
All other areas	at natural ground

14. a. Removal of existing roadway lighting, sign lighting, and traffic signals shall include the following:

(1) Disassembling the luminaires or signals from the mast arms.

(2) Disassembling the mast arms from the poles.

(3) Disassembling and removing the poles and their foundations.

b. "Traffic Signal System Removal" includes the following:

(1) Traffic signal heads.

(2) Poles, their mast arms, and foundations.

(3) Controllers.

(4) All associated and connecting wires, cables, pull boxes, and conduits.

c. "Lighting System Removal" includes the following:

(1) Luminaires.

(2) Poles, their mast arms, and foundations.

(3) Lighting control centers.

(4) All associated and connecting wires, cables, pull boxes, and conduits.

d. "Sign Lighting Removal" includes the following:

(1) Luminaires.

(2) Mast arms or structures.

(3) Associated wire, cable, pull boxes, and conduit.

e. Unless indicated otherwise, foundations, pull boxes, control centers, and all lighting, sign lighting, and traffic components indicated for removal in the plans shall become the property of the Contractor. These items must be removed from the project. Concrete foundations must be removed to at least 2 feet below finished grade. Anchor bolts and reinforcing steel are considered part of the foundation. The Contractor may remove the foundation as an entire unit.

f. The plans will indicate whether existing items are to remain in place, be salvaged, or be disposed of. Salvaged items are to be transported to the location shown in the plans.

g. After the removal has been completed, the Contractor shall backfill the excavation with approved soil and compact it to 95 percent of maximum density as determined by NDR T 99.

h. Salvaged Material Preparation. The material the Contractor is to salvage for the State shall be carefully disassembled and prepared as indicated below:

(1) Poles shall be clean, free from internal wiring, and have hand-hole covers and pole caps in place. Mast arm bolts shall be attached to the pole shafts.

(2) Luminaires shall be clean and have their openings covered with duct tape. Photo controls shall not be salvaged.

(3) Transformer bases shall have covers in place and all associated bolts, nuts, and washers attached.

(4) Power foundations shall be thoroughly cleaned before delivery and shall have the attachment bolts in place.

i. Salvaged Material Disposition:

(1) All components shall be delivered to the Department's storage area identified in the plans.

(2) The Contractor shall contact the NDR storage area two work days prior to delivery and request delivery instructions.

(3) The Contractor will not be allowed to "off load" any materials that are not properly prepared for storage.

(4) It shall be the Contractor's responsibility to protect the salvaged materials until delivery to the State storage area or other approved destination. If the Engineer determines that the Contractor damaged salvaged materials, the Contractor shall dispose of the materials and replace the damaged materials with new materials.

j. Electrical conduit and cable may be abandoned in place.

15. a. The Contractor shall remove signs, sign support structures, and their foundations.

b. This work shall include the removal and disposal of the existing signs, luminaires, support structures, and foundations.

c. The signs and sign luminaires shall be removed from the structure and delivered to the NDR storage area indicated in the plans or as directed by the Engineer.

d. All overhead structures scheduled for removal shall become the property of the Contractor, and the Contractor shall dispose of the items.

e. (1) The exposed portion of the foundations shall be removed to a minimum depth of 2 feet below finished ground elevation.

(2) All debris from the foundation removal shall be disposed of as directed by the Engineer.

(3) After the removal has been completed, the excavation shall be filled and the entire surface shall be restored to the condition of the surrounding area.

16. a. The Contractor shall remove signs and posts.

b. This work shall include the removal of the ground-mounted signs and their posts as indicated in the plans and delivering both the posts and signs to the indicated NDR storage area.

c. (1) The footing shall be removed to a minimum depth of 2 feet below finished ground elevation.

(2) All debris from the footing removal shall be disposed of by the Contractor.

(3) After the removal has been completed, the area shall be restored as directed by the Engineer.

17. a. The Contractor shall remove signs as indicated in the plans.

b. This work involves the removal of existing signs and luminaires on the overhead structures as indicated in the plans. The existing signs and luminaires shall be removed and delivered to the Department storage area as directed by the Engineer.

c. Conduits and wires shall remain in place to accommodate the new luminaires, where applicable, or be tied off at the power source.

18. All structural backfilling which forms any portion of the roadbed embankment or subgrade shall be done as prescribed in Sections 205 and 702.

19. The Contractor shall backfill basements or cavities left by any structure removal to the surrounding ground level, and the cavities shall be backfilled and compacted, as described in Subsection 205.03, to a density of not less than 95 percent of maximum density as determined by NDR T 99.

20. The Contractor may use existing structures during construction, but material which is to be salvaged shall not be damaged.

21. Disposal of Materials:

a. The price bid for the removal of structures will include all right and title to any structure removed and not salvaged.

b. (1) The Contractor shall remove from the project all disposed materials that will not be salvaged.

(2) Removed materials shall not be stored within 1,000 feet of the project right-of-way unless they are not visible from the traveled way.

(3) Materials shall not be burned, buried, or wasted in a stream channel.

c. Broken concrete and masonry rubble may be placed in the toe of slopes and berms, around new piers and culverts, as stream bank anchor, or as directed by the Engineer.

d. Uncontaminated bituminous rubble may be placed in the toes of slopes and berms.

22. The Contractor shall clean all salvaged materials to the Engineer's satisfaction.

203.03 -- Method of Measurement

1. a. All removal work will be measured based on the original position of the items.

b. The excavation cost shall be included in the removal bid item.

c. The excavation volume necessary for any removal shall be deducted from the appropriate excavation bid item.

d. The excavation required for "Removal of Driveway Culvert Pipe" that is to be salvaged shall not be included in the removal bid item. "Removal of Driveway Culvert Pipe" is the only bid item where the required excavation is included in the appropriate roadway excavation bid item.

2. a. The removal of all pavement structure, including base courses, gutters, intersections, and driveways will be surface measured. The unit of payment will be square yards. Driveway, intersection, and pavement removal shall include the underlying base course.

b. Where the curb is integral with the pavement, surface course, or base course, the removal of curbs will be surface measured in square yards as part of the pavement, surface course, or base course.

c. The length of curb and combination curb and gutter which is separate from concrete pavement, surface course, or base course will be measured for payment in linear feet.

3. a. Measurements for curbs will be made along the front face of the curbs.

b. Measurements for combination curb and gutter will be made along the flow line of the gutters.

4. Removing sidewalk will be surface measured for payment. The unit of payment will be the area in square yards.

5. Building removals, regardless of size, are measured by the each.

6. Removal of concrete and masonry structures, including retaining walls, steps, discharge structures, and concrete headers are measured by the each.

7. The length of fence removed will be measured for payment in linear feet.

8. Manhole, catch basin, and inlet removal is measured by the each, including all attached parts and connections.

9. Guardrail post removal, when the posts are not to be reset, will be measured by the each.

10. Delineator removal is measured by the each. The delineator includes the post, the reflector, and the delineator base/anchor.

11. The length of electrical cable or conduit removed will be measured for payment in linear feet.

12. Removal of traffic signal heads, traffic control signs, controllers, lighting control centers, poles, signs, structures and foundations, sign posts, and lighting structures will be measured as single units by the each.

13. "Remove Traffic Signal at _____" is measured as a lump sum. This is the complete removal of a traffic signal at the indicated location and includes:

a. Traffic signal heads.

b. Poles, mast arms, and foundations.

c. Controllers.

d. All associated and connecting wires, cables, pull boxes, and conduits.

14. "Remove Lighting System at _____" is measured as a lump sum and includes the following:

a. Luminaires.

b. Poles, mast arms, and foundations.

c. Lighting control centers.

d. All associated and connecting wires, cables, pull boxes, and conduits.

15. "Remove Sign Lighting at _____" is measured as a lump sum and includes:

a. Luminaires.

b. Mast arms.

c. Associated wires, cables, pull boxes, and conduits.

16. Both wooden and metal pole removal is measured by the each.

17. Bridges and other structures are removed under the pay item "Remove Structure at Station _____", and the unit of measurement is by the each.

18. "Preparation of Structure at Station _____" is measured by the each.

19. Pipe culvert removal will be measured as follows:

a. When the Engineer determines the pipe culvert to be salvageable:

(1) Payment will be made for the length of pipe removed, regardless of pipe diameter. Transportation of the removed pipe to the storage location shown in the proposal will be subsidiary to the pipe removal.

(2) Payment will be made for any required pipe removal excavation in accordance with Section 701 and Subsections 702.04 and 702.05. No deduction will be made for the culvert or existing headwall.

b. When the Engineer determines the existing pipe culvert to be nonsalvageable:

(1) Payment will be made for the excavation volume as "Excavation for Pipe Culverts and Headwalls". See Subsections 702.04 and 702.05.

(2) No additional payment will be made for the length of pipe removed.

(3) Removed, nonsalvageable pipe becomes the property of the Contractor.

c. (1) "Remove Driveway Culvert Pipe" is only measured when the plans indicate the Contractor is to salvage the pipe.

(2) "Remove Driveway Culvert Pipe" is measured by the linear feet.

(3) Excavation for removing driveway culvert pipe is included in appropriate bid items that caused the pipe to be removed. Excavation costs shall not be included in the "Remove Driveway Culvert Pipe" bid item.

20. The overlap of a pipe removal excavation volume with an excavation volume required to construct new work will be deducted by subtracting the overlapping pipe removal excavation volume from the new work excavation volume.

21. "Clearing Tracts _____" will be measured for payment by the each for the removal of all items within the tract except vegetation. Vegetation removal is considered to be part of "Clearing and Grubbing".

22. "Break Concrete Pavement" will be surface measured for payment by the square yard.

23. Both removal and salvage of sewer pipe will be measured by its length in linear feet, regardless of diameter.

24. Underground tank removal is measured by the each.

25. Bridge removal is measured as a lump sum or by the each as identified in the bid Schedule of Items.

26. Removal of retaining walls is measured by the linear foot.

27. Removing miscellaneous items which are included in the proposal, but not specifically covered in this Subsection, will be paid for by the each.

28. "Sawing Pavements" is measured by the length of the cut in linear feet. It includes cuts through pavements, driveways, sidewalks, and other similar flatwork.

203.04 -- Basis of Payment

1.

Pay Item	**Pay Unit**
Break Concrete Pavement	Square Yard (SY)
Clear Tract _____	Lump Sum (LS)
Excavation for Pipe, Pipe-Arch Culverts, and Headwalls	Cubic Yard (CY)
Preparation of Structure at Station _____	Each (ea)
Remove _____	Each (ea), Linear Foot (LF), Square Yard (SY), Cubic Yard (CY), or Lump Sum (LS)
Remove _____ Cable	Linear Foot (LF)
Remove _____ Pole	Each (ea)

Remove Asphalt Surface	Square Yard (SY)
Remove Base Course	Square Yard (SY)
Remove Brick Surface	Square Yard (SY)
Remove Building _____	Each (ea)
Remove Combination Curb and Gutter	Linear Foot (LF)
Remove Concrete Ditch Liner	Square Yard (SY)
Remove Concrete Foundation	Square Yard (SY)
Remove Concrete Median Surfacing	Square Yard (SY)
Remove _____ Conduit	Linear Foot (LF)
Remove _____ Controller	Each (ea)
Remove Culvert Pipe	Linear Foot (LF)
Remove Curb	Linear Foot (LF)
Remove Delineator Units	Each (ea)
Remove Driveway	Square Yard (SY)
Remove Driveway Culvert Pipe	Linear Foot (LF)
Remove Fence	Linear Foot (LF)
Remove _____ Foundation	Each (ea)
Remove Gutter	Square Yard (SY)
Remove Headwalls from Culverts	Each (ea)
Remove Inlets	Each (ea)
Remove Lighting Control Center	Each (ea)
Remove Lighting System at _____	Each (ea)
Remove Lighting Unit	Each (ea)
Remove Manhole	Each (ea)
Remove Pavement	Square Yard (SY)
Remove Pull Box	Each (ea)
Remove Retaining Wall	Linear Foot (LF)
Remove Sewer Pipe	Linear Foot (LF)
Remove Sign	Each (ea)
Remove Sign and Post	Each (ea)
Remove Sign Lighting at _____	Each (ea)
Remove Sign, Structure, and Foundation	Each (ea)
Remove Structure at Station _____	Each (ea)
Remove Traffic Signal at _____	Each (ea)
Remove Traffic Signal Head	Each (ea)
Remove Underground Tank	Each (ea)
Remove Walk	Square Yard (SY)
Salvage Sewer Pipe	Linear Foot (LF)
Sawing Pavement	Linear Foot (LF)

2. The pay quantities for removal of structures and obstructions will be based on the quantities shown in the plans unless changes are authorized.

3. The State may sell and/or remove buildings prior to the start of construction. If buildings are sold and/or removed before this date, the item "Remove Building" will be deleted from the final pay quantities. The Contractor shall still perform the work of clearing the tract.

4. The State may "strip salvage" buildings by removing doors, windows, and fixtures before the construction start date. When this occurs, the Contractor will be paid the full bid price for the building removal.

5. Sawing pavement is paid for as an "established" contract unit price which is shown in the bid proposal "Schedule of Items."

6. Payment is full compensation for all work prescribed in this Section. Separate payment for excavating, backfilling, compacting cavities resulting from the removal of structures or obstructions, and transporting salvaged materials to designated storage locations will not be made.